

Application No. 09/684,616
Amendment dated August 25, 2003
Reply to Advisory Action of July 23, 2003

IN THE CLAIMS

Please amend the claims as follows:

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Claim 1 (Previously Presented): A method of driving an AC plasma display panel, wherein said AC plasma display panel comprises:

an address electrode including t (t : integer of at least 2) strip portions, which are extended in a first direction and arranged in a second direction perpendicular to said first direction, and which are electrically connected in common;

t discharge cells belonging to said t strip portions respectively;

a scan electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode;

a sustain electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode; and

a dielectric substance covering at least one of said scan electrode and said sustain electrode,

said method comprising applying a prescribed voltage to said strip portions of said address electrode in common, applying a prescribed voltage to each strip portion of said scan electrode, and applying a first voltage to one of said t strip portions of said sustain electrode belonging to a single discharge cell among said t discharge cells while applying a second voltage, which is different from said first voltage, to remaining all of said strip portions of said sustain electrode, for forming desired discharge only in said single discharge cell.

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~~Claim 2 (Original): The method of driving an AC plasma display panel according to claim 1, wherein~~

~~said t strip portions of said scan electrode form a single strip electrode.~~

~~Claim 3 (Previously Presented): The method of driving an AC plasma display panel according to claim 1, wherein~~

~~a first potential difference between said strip portion of said sustain electrode supplied with said first voltage and said strip portion of said scan electrode paired with said strip portion supplied with said first voltage is larger than a second potential difference between said strip portion of said sustain electrode supplied with said second voltage and said strip portion of said scan electrode paired with said strip portion supplied with said second voltage.~~

~~Claim 4 (Previously Presented): The method of driving an AC plasma display panel according to claim 3, wherein~~

~~said second potential difference is substantially zero.~~

~~Claim 5 (Previously Presented): The method of driving an AC plasma display panel according to claim 1, wherein~~

~~said first voltage is successively applied to one of said t strip portions of said sustain electrode while said second voltage is applied to remaining all of said strip portions of said sustain electrode in a period when said prescribed voltage is applied to said scan electrode.~~

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Claim 6 (Previously Presented): The method of driving an AC plasma display panel according to claim 1, wherein

said AC plasma display panel has a plurality of said scan electrodes and a plurality of said sustain electrodes respectively,

in a period for applying said first voltage to each one of said strip portions of each of said plurality of sustain electrodes in common, said prescribed voltage is successively applied to one of said strip portions of said scan electrodes paired with said strip portions that are being supplied with said first voltage.

Claim 7 (Previously Presented): The method of driving an AC plasma display panel according to claim 6, further comprising:

forming, after said period, first auxiliary discharge in said discharge cell to which said strip portion of said sustain electrode supplied with said second voltage in said period belongs between strip portions of said scan electrode and said address electrode.

Claim 8 (Previously Presented): The method of driving an AC plasma display panel according to claim 6, further comprising:

forming, after said period, second auxiliary discharge in said discharge cell selected and supplied with said first voltage for forming said desired discharge in said period between strip portions of said scan electrode and said sustain electrode.

Claim 9 (Currently Amended) An AC plasma display panel comprising:

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an address electrode including t (t : integer of at least 2) strip portions;

t discharge cells, having discharge gaps capable of forming desired discharge, belonging to said t strip portions respectively;

a scan electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode;

a sustain electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode;

a dielectric substance covering at least one of said scan electrode and said sustain electrode; and

a plurality of non-discharge cells, having non-discharge gaps harder to form discharge than said discharge gaps, arranged on a same plane and belonging to said address electrode, wherein

said t discharge cells are arranged on said same plane and arranged adjacently to each other through at least one said non-discharge cell at least in a direction parallel to a display line,

said AC plasma display panel further comprising:

a plurality of barrier ribs separating said non-discharge cells from said discharge cells or said non-discharge cells at least along a direction intersecting with said display line, wherein

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at least two adjacent ones of said strip portions of said address electrode are integrated with each other extending over said non-discharge cells and said discharge or non-discharge cells separated by said barrier ribs.

Claim 10 (Previously Presented): A plasma display device comprising:

an AC plasma display panel; and

a driving unit for said AC plasma display panel, wherein

said AC plasma display panel comprises:

an address electrode including t (t : integer of at least 2) strip portions, which are extended in a first direction and arranged in a second direction perpendicular to said first direction, and which are connected to an output terminal of said driving unit in common;

t discharge cells belonging to said t strip portions respectively;

a scan electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and arranged to grade-separately intersect with said strip portions of said address electrode belonging to said discharge cells;

a sustain electrode including t strip portions belonging to said t discharge cells in one-to-one correspondence and paired with said strip portions of said scan electrode; and

a dielectric substance covering at least one of said scan electrode and said sustain electrode, and

said driving unit applies a prescribed voltage to said strip portions of said address electrode in common, applies a prescribed voltage to each strip portion of said scan electrode, and applies a first voltage to one of said t strip portions of said sustain electrode belonging to

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a single discharge cell among said t discharge cells while applying a second voltage, which is different from said first voltage, to remaining all of said strip portions of said sustain electrode, for forming desired discharge only in said single discharge cell.

Claim 11 (Original): The plasma display device according to claim 10, wherein
said AC plasma display panel further comprises a plurality of non-discharge cells
arranged on a same plane and belonging to said address electrode,
each said discharge cell has a discharge gap capable of forming desired discharge
while each said non-discharge cell has a non-discharge gap harder to form discharge than said
discharge gap,
said t discharge cells are arranged on said same plane and arranged adjacently to each
other through at least one said non-discharge cell at least in a direction parallel to a display
line,
said AC plasma display panel further comprises a plurality of barrier ribs separating
said non-discharge cells from said discharge cells or said non-discharge cells at least along a
direction intersecting with said display line, and
at least two adjacent ones of said strip portions of said address electrode are integrated
with each other extending over said non-discharge cells and said discharge or non-discharge
cells separated by said barrier ribs.